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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 14

Application Number: 09/433,427
Filing Date: November 04, 1999
Appellant(s): LUDWIG ET AL.

William C. Roch (Registration No. 24,972)
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 09/29/2003.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

Appellant's brief includes a statement that claims 1-9 and 10-18 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

5,557,798	Skeen et al.	9-1996
6,157,934	Khan et al.	12-2000

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bittinger et al. (USPN 5,754,774) in view of Skeen et al. (USPN 5,557,798) and Khan et al. (USPN 6,157,934).

Regarding claims 1 and 10, Bittinger et al. (USPN 5,754,774) disclose a system for connection of a first server computer of a service requestor and a second server computer of a service provider, each of said first server computer and said second server computer being connected to at least one client computer comprising:

a. Means for providing a first and a second connector application for permitting said first server computer access to a copy of said first connector application and for permitting said second server computer access to a copy of said second connector application (column 30, lines 45-54; column 3, lines 36-45).

b. Means wherein said copies of first and second connector application each comprises a connection agreement for a first work task (column 30, lines 45-54; column 3, lines 36-45).

c. Means for said first work task to be transposed from said first service terminology to an input data set in common terminology (column 30, lines 54-62; column 3, lines 36-45).

d. Means for marshalling input data set to said second server computer over a common connection and said marshaled input data set being transposed to a second work task by said second server from common terminology into said second service terminology and said second work task being processed (column 30, line 62 through column 31, line 7; column 3, lines 36-45).

Although the system disclosed by Bittinger et al. (USPN 5,754,774) shows substantial features of the claimed invention, it fails to disclose specifically a first and second server for running first and second workflow management systems, wherein the first task is part of the first workflow management system, and first and second mapping tables including service terminology and common terminology and also wherein the first work task is transposed by the first mapping table and the second work task is transposed by the second mapping table.

Nonetheless, these features are well known in the art and would have been an obvious modification to the system disclosed by Bittinger et al. (USPN 5,754,774), as evidenced by Skeen et al. (USPN 5,557,798) and Khan et al. (USPN 6,157,934).

In an analogous art, Skeen et al. (USPN 5,557,798) teach a system for translation of requests between two computing systems having a first and second server and first and second

mapping tables including service terminology and common terminology, wherein the first work task is transposed by the first mapping table and the second work task is transposed by the second mapping table (figure 11; column 14, line 54 – column 15, line 1)

Given the teachings of Skeen et al. (USPN 5,557,798), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Bittinger et al. by the use of mapping tables for conversion, as disclosed by Skeen et al. (USPN 5,557,798) in order to allow for configuration changes by the end user or system administrator without additional software development. This also allows for the conversion to always be the same, if a new application is inserted, it must generate a conversion table, but all the other applications are unchanged. Please note that although this reference teaches specific hardware types, the function translates to any applicable platform (column 7, lines 44-45; 58-64)

In an analogous art, Khan et al. (USPN 6,157,934) teach a system for workflow management in a communications network having a server running a workflow management system wherein a first task is a part of the first workflow management system (column 2, lines 29-34).

Therefore, data exchange among workflow management systems is known in the art, a person having ordinary skill in the art would have readily recognized the desirability and advantages of applying Bittinger et al. to the workflow applications, such as disclosed by Khan et al. (USPN 6,157,934) because it would have provided the function of passing workflow data among workflow management systems without requiring specific translation code in the workflow applications and permit the code to be separate from the core workflow applications so as to allow configuration changes without rewriting the workflow application Please note that

the specification of server to server or server to client communications is not significant in the claim. It is well known to one of ordinary skill in the art that these machine types are interchangeable and can represent separate processors on a single machine. Please note that this reference is used to show that the motivation for utilizing the basic function as defined above in the special case of workflow applications existing on the machines. Also please note that the terms server and client can be interchangeable depending on the present function of the machine.

Regarding claims 2 and 11, Bittinger et al. (USPN 5,754,774) (as applied to claims 1 and 10) teach all the limitations as described above. Further, they teach:

a. Means wherein said processed second work task generates a result, said result being transposed from said second service terminology into an output data set in said common terminology, said mapped output data set being marshaled to said first server computer over said common connection, and said marshaled output data being transposed from said common terminology into said first service terminology (column 31, lines 58-64; column 3, lines 36-45)

Although the system disclosed by Bittinger et al. (USPN 5,754,774) shows substantial features of the claimed invention, it fails to disclose:

a. Means wherein said result is transposed by said second mapping table and said mapped output data set being transposed by said first mapping table.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Bittinger et al. (USPN 5,754,774), as evidenced by Skeen et al. (USPN 5,557,798).

In an analogous art, Skeen et al. (USPN 5,557,798) teach a system for translation of requests between servers and clients having:

a. Means wherein said result is transposed by said second mapping table and said mapped output data set being transposed by said first mapping table (figure 11; column 14, line 54 – column 15, line 1). Note that in the reference, two different platforms share data by converting it to a common format.

Given the teaching of Skeen et al. (USPN 5,557,798), a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Bittinger et al. (USPN 5,754,774) by employing the use of a mapping table for conversion, as disclosed by Skeen et al. (USPN 5,557,798) in order to allow for configuration changes by the end user or system administrator without additional software development.

Regarding claims 3 and 12, Bittinger et al. (USPN 5,754,774) (as applied to claims 1 and 10) teach all the limitations as described above. They further teach means wherein said copy of said first connector application resides in a first access device of said service requestor; said first access device comprising a first access computer including said first connector application (column 30, lines 45-54; column 3, lines 36-45). Please note that the connector application can exist in the client, the server, or in two client machines depending on where the actual processing is taking place.

Regarding claims 4 and 13, Bittinger et al. (USPN 5,754,774) (as applied to claims 1 and 10) teach all the limitations as described above. They further teach means wherein said copy of said second connector application resides in a second access device of said service provider; said

second access device comprising a second access computer including said second connector application (column 30, lines 45-54; column 3, lines 36-45; figure 2).

Regarding claims 5 and 14, Bittinger et al. (USPN 5,754,774) (as applied to claims 1 and 10) teach all the limitations as described above. They further teach means wherein said copy of the first connector application resides in said first server computer of said service requestor (figure 2). Please note that the connector application can exist in the client, the server, or in two client machines depending on where the actual processing is taking place.

Regarding claims 6 and 15, Bittinger et al. (USPN 5,754,774) (as applied to claims 1 and 10) teach all the limitations as described above. They further teach means wherein said copy of the second connector application resides in said second server computer of said service provider (figure 2).

Regarding claims 7 and 16, Bittinger et al. (USPN 5,754,774) (as applied to claims 1 and 10) teach all the limitations as described above. They further teach means wherein the copy of the first connector application resides in the first client computer (figure 2).

Regarding claims 8 and 17, Bittinger et al. (USPN 5,754,774) (as applied to claims 1 and 10) teach all the limitations as described above. They further teach means wherein the copy of the second connector application resides in the second client computer (figure 2).

Regarding claims 9 and 18, Bittinger et al. (USPN 5,754,774) (as applied to claims 1 and 10) teach all the limitations as described above. They further teach means wherein the first workflow application is essentially the same as the second workflow application (column 3, lines 35-45). Note that the connection agreement on each end converts the message to the native

format for the client/server application. The applications share data and can provide essentially the same functionality.

(11) Response to Argument

Regarding the Bittinger et al. (USPN 6,453,362) reference, the applicant argues "The primary reference Bittinger et al. (US 6,453,362) does not relate specifically to workflow management systems" (Appeal Brief page 13, paragraph 3) and further argues "Bittinger et al. provides a general communication system not specifically related to workflow management applications" (Appeal Brief page 14, paragraph 2). The argument is not persuasive because the rejection does not assert that Bittinger et al. relates specifically to workflow management systems. It is used in combination with Khan et al. (USPN 6,157,934) to render this portion of the claim obvious.

Regarding the Skeen et al. (USPN 5,557,798) reference the applicant argues "Skeen et al. is also not related specifically to workflow management systems and applications" (Appeal Brief page 15, paragraph 2) and further argues "Skeen at al. fails to specifically disclose workflow management applications" (Appeal Brief page 16, paragraph 3). The argument is not persuasive because the rejection does not assert that Skeen et al. relates specifically to workflow management systems. Skeen et al. shows the implementation of a mapping table for format conversion in the transfer of information from one application to another. Please note that the Skeen et al. reference does not limit the types of applications that may communicate via the method of the reference, it provides a framework for communication that reads on the claims as shown above in the grounds of rejection.

Applicant further argues "it is quite evident that the prior art rejection attempts to apply Skeen et al. to the general system of workflow management applications through clear hindsight and only through the benefit of the disclosure and teachings of the present invention" (Appeal Brief page 16, paragraph 3). The argument is not persuasive because the Skeen et al. reference largely teaches the communication framework of the claims and specifically implements the use of mapping tables. It provides these functions as a benefit to any computer system where communication must take place among disparate software applications of any type. Skeen et al. point out specifically "With proliferation of different types of computers and software programs...there has arisen a need for a system by which such exchanges of data can occur" (column 1, lines 31-36). As workflow management applications become more prevalent, the methods of Skeen et al. would naturally become useful in their communications. The combination of Bittinger et al. (USPN 6,453,362) with Skeen et al. renders the claims obvious as shown above in the grounds of rejection.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Regarding the Khan et al. (USPN 6,157,934) reference, the applicant argues "the present invention relates to and provides an interface between different workflow management

systems...Khan et al. does not disclose or discuss a similar interaction" (Appeal Brief, page 16, paragraph 4 – page 17, paragraph 1). The argument is not persuasive because the reference to Khan et al. was simply used to show the prevalence of workflow management systems as a type of application that commonly transmits information on a computer network. The references of both Skeen et al. and Bittinger et al. show a system for and the benefits of the transfer of information between applications using different data or communication formats in a variety of software applications. Workflow management systems are software applications and therefore would benefit from this method of connection.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

The rejection clearly shows that the communication methods claimed were known by the teachings of Skeen et al. and Bittinger et al. Applying Bittinger et al. and Skeen et al. to the use of workflow management systems provides a clear benefit to the system by allowing for the communication between disparate platforms or workflow applications. The Skeen et al. reference specifically points out that the communication method disclosed would benefit any developing computer system or software application (column 1, lines 31-36).

The applicant argues "Khan et al. is used only as an example, and does not address the issue of distributed, loosely coupled WfMSs, or any other configuration of multiple WfMSs" (Appeal Brief page 17, paragraph 4 – page 18, paragraph 1). The argument is not persuasive because the communication methods of Bittinger et al. and Skeen et al. are advantageous to any

number of software applications including workflow management systems such as the one outlined in the Khan et al. reference. The Skeen et al. reference points out specifically that that the communication method disclosed would benefit any developing computer system or software application (column 1, lines 31-36). Conversely, given there are well known disparate workflow management systems as noted by the applicant in the specification and on page 4, paragraph 6 of the Appeal Brief, it is clear that the communication systems of Bittinger et al. and Skeen et al. would benefit the overall function of data exchange among workflow management applications by allowing it to communicate with other, disparate workflow management applications on different computer platforms.

The applicant further argues "Bittinger et al. propose an interceptor and use it for protocol conversion...this architecture is used very differently and for different ends, which are totally unrelated to workflow management. While an http get or http post constitutes a task request in the most abstract sense, it is very different from the specific and detailed task assignment of a workflow management system by including-among other items-time lines and information used for managing the task execution and potentially causing multiple responses" (Appeal Brief, page 18, paragraph 2). The argument is not persuasive for two reasons. First, the argument is not persuasive because the Bittinger et al. reference provides a communication method analogous to the one detailed in the claim language and in combination with the references of Skeen et al. and Khan et al., renders the claims obvious. Second, the argument is not persuasive because the http get and http post messages are requests for a task to be performed, thus are clearly a type of task request. Further, the details of the task requests are not included in the claim language. Therefore, the argument is moot.

The applicant further argues "the Examiner claims that the Bittinger et al. system uses a connection agreement to specify the interaction protocol. However, there is no mention of a connection agreement" (Appeal Brief, page 18, paragraph 3). The argument is not persuasive because clearly there is a connection agreement in place in the Bittinger et al. system. On each end of the communication, a conversion is made to a common format before sending data. Upon arrival at the receiving end, the receiver transforms the data from the common format into a readable format. The decision to transform into this intermediate format is a connection agreement.

The applicant further argues "In the absence of an agreement defining a shared technology, the approach of Skeen et al. cannot be applied to the problem since it is only usable in the context of well-defined formats...not for ad-hoc specifications of a shared terminology, which require an explicit agreement of terminology" (Appeal Brief page 18, paragraph 4 – page 19, paragraph 1). First, the argument is not persuasive because as shown above, the connection agreement does exist in the system of Bittinger et al. Further, the system of Skeen et al. also utilizes a connection agreement to allow the first format to be converted to the common format and back to a second format at the receiver (column 4, lines 7-12) Second, the argument is not persuasive because the claimed invention does not specify that "ad-hoc" specifications of shared technology will be required of the system. Therefore, the argument is moot.

The applicant further argues "distributed workflow management is still a very active and open field of research. Even today, many issues remain unsolved and, at the time of the invention, as far as the inventor is aware, no known vendor has offered the proposed technology despite its obvious benefits" (Appeal Brief, page 19, paragraph 2). The argument is not

persuasive because references such as Khan et al. show the well known use of workflow management systems in computer networks. Further, even if workflow management systems are considered to be an emerging technology, it is obvious to apply previously known methods to a new system if it improves its functions. Skeen et al. point out specifically "With proliferation of different types of computers and software programs...there has arisen a need for a system by which such exchanges of data can occur" (column 1, lines 31-36). The combination benefits workflow management systems and is obvious for the reasons shown in the rejection above.

The applicant further argues "(1) it is non-obvious to combine the three references patents and, even [if] combined, (2) they do not provide the same features as the present invention, because, among other reasons, they do not provide the features related to agreements defining a shared terminology and hence at an arbitrary level of granularity" (Appeal Brief, page 19, paragraph 3). The "arbitrary level of granularity" limitation is not included specifically in the claims. Therefore, the argument is moot. In response to applicant's argument that the examiner has combined an excessive number of references, reliance on a large number of references in a rejection does not, without more, weigh against the obviousness of the claimed invention. See *In re Gorman*, 933 F.2d 982, 18 USPQ2d 1885 (Fed. Cir. 1991).

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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December 4, 2003

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